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ABSTRACT

An attempt to diversify the classroom experience at Simon Fraser University's Department of Geography has taken two thrusts: the large classroom integrative media use, and the student prepared multimedia "essay." The traditional lecture technique, which ignores the entire media revolution, is deplored. The first of two ways of conveying more meaning to the student through multimedia techniques involves an integrative experience, such as sound/slide or film presentations accompanying a lecture. The second way involves a freestanding sequence, an individual unit which makes a complete statement about some area of concern. At Simon Fraser, the students are encouraged to discover multimedia alternatives to the written essay through non-credit media workshops. The workshops cover the areas of graphic and sound arts, photography and videotape. The comprehensive introduction to audio-visual techniques gained in the workshops is applied to class projects which become part of the instructor's classroom presentation. The self-learning multimedia package is suggested as a future development to replace the lecture technique altogether. (KSM)

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Multimedia on multimedia: educational environments

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1. Traditional classroom teaching and its origins.

The bulk of our education in which the largest number of students participate, and in which those we consider best are trained, takes place in the traditional classroom setting. To this day the "lecture" is a situation where a single teacher instructs from 20 to over 500 students by making a speech to them on a set time and day each week. Traditionally students take notes on the speech, memorise portions of it, and otherwise increase their "store of knowledge" by attending it. Usually after a set period of time the students are examined on the contents of the lectures.

This approach has long historical origins, back to the Medieval university. Before the mass production of books, the function of the lecture was simple: books students could not obtain, were read to them. The lecture was more efficient than the library in enabling a large number of students to be exposed to the contents of a single hand-written, hand illustrated manuscript, at a time when scholarship was limited by the relative scarcity of books and the relative difficulty of communicating facts and ideas. A handwritten text of the time could be heard faster than it could be read, and obviously many students at a time could be exposed to one book simultaneously.

2. The media revolution ignored

Today, after the handwritten book has given way to the printed book, to the mass production of printed material, and to a technological revolution in other media, where we have a surplus of books, television, radio, film, etc., the classroom is still remarkably similar to its Medieval ancestor. True the lecturer is now expected to be a bit more stimulating or a bit more amusing than the mere reader of a rare manuscript, but the classroom remains the focus of an oral presentation of substantive material to a group of students.

This method of communication at a time of a knowledge explosion and so much exposure to alternative media, only serves to obscure meaning rather than reveal it. The conventional method of instruction requires so much telling (verbally or in print) that students get lost in the discourse. Their attention is lulled by monotonous presentation, and by so much "knowledge" that they cannot grasp the whole. We often see the tragic results of this in our "best" students who can repeat what we have told them but who cannot apply it in a new context - in other words it has no meaning to them. Their learning may have been comprehensive but it has not been comprehending.

Thorough comprehension, real learning is a process of assimilating experience by relating it to perceived meaning, and by increasing one's sensitivity to information flo . Until the teacher can insure that his student's experience of his subject matter is perceived as meaningful, and until the student is sensitive to the holistic presentation of knowledge there is little likelihood that his instruction will be assimilated. About the only purpose of Medieval instruction in the Twentieth Century classroom will be to prepare students for examinations, the best of which usually will merely tell the teacher more than he cared to know, since it comes back in the same form he knew it.

The alternative is to open up the Twentieth century classroom to more varied Twentieth century techniques.

3. Multimedia techniques

There are two ways to convey more meaning for the student: (1) through imaginative use of multimedia techniques in the classroom, by expanding the classroom walls until they no longer exist, and (2) link the multimedia to practice, i.e. let the student do it.

Most educators, not just geographers, are skeptical of multimedia because their experiences have been unimaginative. They have seen too many audio-visual materials designed for the type of telling we do in books. But audo-visual techniques are not simply (if even) a more effective means of discourse - they are a powerful tool in helping the student in that process of assimilating experience by relating it to perceived meaning. In other words they can stimulate the conceptualisation essential

to the effective learning process.

A typical classroom situation is what we call a transient medium; that is the student can store material presented to him by the lecturer, by way of notes, a tape recorder, or simply by remembering. Later the student goes through his notes or his memory or listens to the tape assimilating the wanted facts or concepts. The simplest alternate medium we have to hand is the blackboard or overhead projector; this is a persistent medium, that is the information, or some information, is left in focus for a time. This gives the brain a chance to act, either filing or discarding the information immediately. We can heighten the learning process by simply combining several levels of transient and persistent media.

We can, however, develop multimedia beyond this simple example. Since we have to teach, in our courses not just what geographers think about, but how geographers think, first hand experiences in the field are excellent learning situations. We learn by experience, and the more real the experience, the more permanent and effective the learning. Second best is an attempt to contrive or evoke memories of common/ individual experience, and then ground them in generalized principles, by using as many media (and senses) as possible (see Figure 1). Here we enter the multimedia environment.

4. The Simon Fraser University experience

In 1965 one of us was plunged straight from graduate school into the Medieval classroom. Knowing no better he persisted for several years using only a simple combination of transient and persistent presentation. Several of the classes had 300 or more students in them, and as an effort to break out of the conventional mould a number of short movies were used to break up the transient presentation of the lecturer. In one particular course we lacked a movie, and not having the time or money to make one, an experimental sequence of sound and slides was introduced in 1968. To parallel the course a three part sequence in urban geography was created; it was presented in its entirety in the first and last lecture periods and part by part before the relevant portion of the course.*

* This sequence is reported in M.E. Eliot Hurst "Geography and the contemporary urban scene" Journal of Geography, Vol. LXX No. 2, 1971, pp. 110-114.

This first sequence is what we term integrative, in which the sound/slide presentation is an integral part of a classroom presentation, and which if shown alone has little meaning; but when shown within the context of a particular lecture simply seems to be a continuation of the learning experience, albeit in a slightly different dimension.

Since that time we have branched out into freestanding sequences, an individual unit which like a movie or television programme make a complete statement about some area of concern. These can be taken out of the classroom context and have a meaning of their own - our presentation at the 1972 AAG "Geography for whom?" was of this nature, as is this year's "Multimedia on multimedia."

Extension into other media by the instructor is of course only one side of the multimedia coin, and if it remained with that one dimension only the media experience would be novel and interesting, extend the students experience to some extent, and perhaps stop him from falling asleep in the lecture room. Having demonstrated the viability of multimedia in the classroom, the most vital step has been to encourage the students themselves to use a medium of presentation other than the written essay.

This second step has become a veritable media bonanza, without which the multimedia experience at Simon Fraser would have been much more limited. However, to get the students to express themselves in other media, means we must make them literate in alternate media. To this end we now run several times a year non-credit media workshops. The objective is to give students an introduction to the use of other media and to make them familiar with the techniques involved in their production. These workshops now encompass graphic arts, sound, photography, and television. Each student is required to take instruction in graphics and sound, before moving on to either photography or videotape. The graphic arts workshops introduce the student to line, balance, texture, and colour, and then sets out how to combine those basic design elements to communicate an expression or to elicit a response. The students are also instructed on how to use various graphic tools and materials, finally producing graphics for media - slides, television, cinematography, and

posters.

The aim of the sound workshop is to make the student more aware of sound, especially in terms of quality. They acquire the skills required for the manipulation of microphones and tape-recorders, and then gain actual experience in producing interviews, documentaries, and sound tracks for sound/slide sequences and videotapes.

The photography workshop gives the student a working knowledge of cameras, film and projectors. The art of photography is reduced to simple, repeatable, manual skills. With this awareness, and drawing on the two earlier graphic and sound workshops, he/she is then better equipped to utilize visual language in a presentation.

The television workshop gives basic instruction in the use of portable video camera and recorder; how to apply graphics, sound techniques, and to edit the video-tapes. Videotapes have proven to be one of the most successful of the student multimedia tools, particularly in documenting contemporary community concern and in bringing real-life situations into the seminar/tutorial room.

At the conclusion of the workshops the student has had a comprehensive introduction to audio-visual techniques. He can then turn to individual geography courses, and using the department's stock of video-packs, cameras, tape recorders, etc. prepare as an individual or in a group, a multimedia alternative to the written essay. Completed projects are presented to the instructor and members of the class for discussion and evaluation. Some of the student productions have been so successful that they have become part of the instructor's classroom presentation.

And so we come the full circle.

5. Conclusions

The attempt to diversify the classroom experience has taken two thrusts at Simon Fraser - the large classroom integrative media use; and the student prepared multimedia "essay." Although we may have come a full circle, we feel that it is only the beginning. We have not touched to date a third alternative, which is

to present a self-learning multimedia package which dispenses with the Medieval lecture hall altogether.* We have held back for two principle reasons: one finance, the other the desire to retain instructor/student contact.

We have so far only scratched the surface of techniques, feedback and environments, and we look forward to developing them further including perhaps that third strain, in the coming years.

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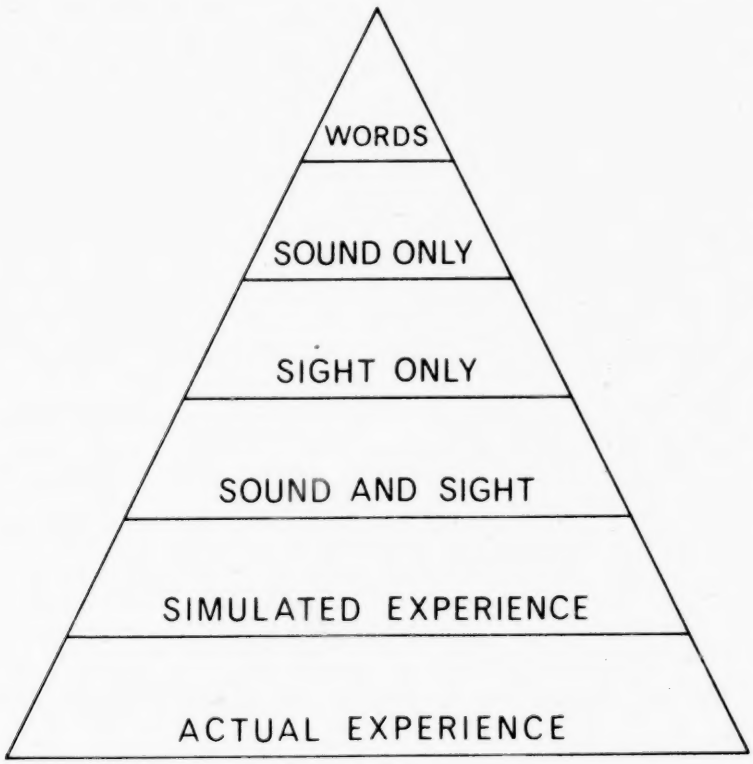
* See for example University Affairs, Sept. 1972 for a description of the Ontario Education Communications Authority "Arts 100" media package; and B.M. Fagan, "The education of a professor: the sequel" Educational Television Jan. 1971, pp. 13-16 for a more personal description of how an introductory Anthropology course was packaged, whilst retaining some instructor/student relations.

Figure 1



Cone of experience